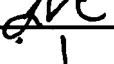
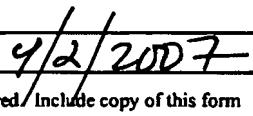


FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00800		Serial No.: 10/698,180		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>(Use Several Sheets if Necessary)</small> <small>(37 CFR § 1.98(b))</small>				Applicants: Giruush Upadhyaa et al.				
				Filing Date: October 30, 2003		Group Art Unit: 3744		
<b>U.S. PATENT DOCUMENTS</b>								
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date	
JKC	AA	4,474,172	10/02/1984	Burke	126	449	10/25/1982	
JKC	AB	US 2004/0216863 A1	11/04/2004	Hu	165	110	04/30/2003	
	AC							
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<b>FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS</b>								
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
	AK							
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<b>OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)</b>								
	AP							
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Examiner:	JKC	Date Considered: April 2, 2007						
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Paper No. 20070131

FORM PTO-1449 (Modified)		JUL 31 2006		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00800		Serial No.: 10/698,180		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))						Applicants: Giru Upadhy et al.				
						Filing Date: October 30, 2003		Group Art Unit: 3253-3744		
<b>U.S. PATENT DOCUMENTS</b>										
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee		Class	Subclass	Filing Date		
	AA	4,494,171	01/15/85	Bland et al.		361	386	08/24/82		
	AB	5,145,001	09/08/92	Valenzuela		165	164	04/23/91		
	AC	6,131,650	10/17/00	North et al.		165	170	07/20/99		
	AD	6,196,307 B1	03/06/01	Ozmat		165	185	06/17/98		
	AE	6,508,301 B2	01/21/03	Marsala		165	80.4	04/17/01		
	AF	US 2004/0112571 A1	06/17/04	Kenny et al.		165	80.3	10/30/03		
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Examiner:			Date Considered: 							
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.									

FORM PTO-1449 (Modified)		JUN 26 2006 U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00800	Serial No.: 10/698,180
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Separate Sheets If Necessary) (37 CFR § 1.98(b))				Applicants: Girish Upadhyay et al.	
				Filing Date: October 30, 2003	Group Art Unit: 3752-3744

## U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
JK	AA	5,564,497	10/15/96	Fukuoka et al.	165	152	11/03/95
JK	AB	5,810,077	09/22/98	Nakamura et al.	165	153	02/20/97
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## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
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## OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

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Examiner:

*JK Cane*

Date Considered:

*9/2/2007*

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00800	Serial No.: 10/698,180			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))		Applicants: Girish Upadhyay et al.						
				Filing Date: October 30, 2003	Group Art Unit: 2763 3744			
U.S. PATENT DOCUMENTS								
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date	
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FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS								
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							Yes	No
JKC	AK	DE 197 10 716 C2	09/24/98	DE	H01S	5/024		X
JKC	AL	WO 01/25711 A1	04/12/01	PCT	F28F	3/04		X
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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)								
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Examiner:	JKC		Date Considered: 9/2/2007					
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00800	Serial No.: 10/698,180		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))				Applicants: Girish Upadhyay et al.			
				Filing Date: October 30, 2003		Group Art Unit: 3749 7753	
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Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
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FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS							
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<i>dk</i>	AK	JP 1-256775	10/13/89	JP	F 25 D	9/00	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>X</i>
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Examiner:	<i>LV Cane</i>		Date Considered:		<i>4/2/2007</i>		
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						

FORM PTO-1449 (Modified)		AUG 11 2005 U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00800		Serial No.: 10/698,180	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))				Applicants: Girish Upadhyay et al.			
				Filing Date: October 30, 2003		Group Art Unit: 3753 3744	
U.S. PATENT DOCUMENTS							
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
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FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS							
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation
<i>JVC</i>	AK	JP 10-99592	04/21/98	JP	D06F	39/08	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No X
<i>JVC</i>	AL	JP 2001-326311	11/22/01	JP	H01L	23/427	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No X
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Examiner:	<i>J. V. C.</i>			Date Considered: 4/2/07			
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						

FORM PTO-1449  
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OCT 08 2004

U.S. Department of Commerce  
Patent and Trademark Office

Attorney Docket No.: COOL-00800

Serial No.: 10/698,180

INFORMATION DISCLOSURE STATEMENT BY APPLICANT  
(Use Separate Sheets If Necessary)  
(37 CFR § 1.98(b))

Applicants: Girish Upadhyay et al.

Filing Date: October 30, 2003

Group Art Unit: 3744

## U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
<i>JVC</i>	AA	5,179,500	01/12/93	Koubek et al.	361	385	04/02/91
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Examiner:

*JVCinc*

Date Considered:

4/2/07

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark Office

Attorney Docket No.: COOL-00800

Serial No.: 10/698,180

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

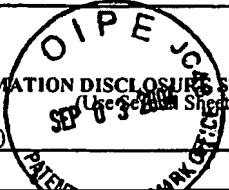
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(37 CFR § 1.98(b))

Applicants: Girish Upadhyा et al.

Filing Date: October 30, 2003

Group Art Unit: 2752 3744



## U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
AVC	AA	6,632,719 B1	10/14/03	DeBoer et al.	438	381	08/31/00
	AB						
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Examiner:

AVC

Date Considered:

4/2/07

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark Office

Attorney Docket No.: COOL-00800

Serial No.: 10/698,180

INFORMATION DISCLOSURE STATEMENT BY APPLICANT  
(Use Several Sheets If Necessary)

Applicants: Girish Upadhyay et al.

Filing Date: October 30, 2003

Group Art Unit: 3753 3744

17 CFR 1.8(b)

JCS  
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## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
					Yes	No
97212126.9	03/04/97	CN	BO1D	61/42		X
AB	10/06/00	JP	H01L	21/50		X

## OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

AC	Stephen C. Jacobson et al., "Fused Quartz Substrates for Microchip Electrophoresis", Analytical Chemistry, Vo. 67, No. 13, July 1, 1995, pages 2059-2063.
AD	Kendra V. Sharp et al., "Liquid Flows in Microchannels", 2002, Vol. 6, pages 6-1 to 6-38.
AE	Shuchi Shoji et al., "Microflow devices and systems", J. Microtech. Microeng. 4 (1994), pages 157-171, printed in the U.K.
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AG	J. H. Wang et al., "Thermal-Hydraulic Characteristic of Micro Heat Exchangers", 1991, DSC-Vol. 32, Micromechanical Sensors, Actuators, and Systems, pages 331-339.
AH	Gad Hetsoni et al., "Nonuniform Temperature Distribution in Electronic Devices Cooled by Flow in Parallel Microchannels", IEEE Transactions on Components and Packaging Technologies, March 2001, Vol. 24, No. 1, pages 16-23.
AI	X. F. Peng et al., "Heat Transfer Characteristics of Water Flowing through Microchannels", Experimental Heat Transfer An International Journal, Vol. 7, No. 4, October-December 1994, pages 265-283.
AJ	Linan Jiang et al., "Forced Convection Boiling in a Microchannel Heat Sink", Journal of Microelectromechanical Systems, Vol. 10, No. 1, March 2001, pages 80-87.
AK	Muhammad M. Rahman et al., "Experimental Measurements of Fluid Flow and Heat Transfer in Microchannel Cooling Passages in a Chip Substrate", 1993, EEP-Vol. 4-2, Advances in Electronic Packages, pages 685-692.
AL	X. F. Peng et al., "Forced convection and flow boiling heat transfer for liquid flowing through Microchannels", 1993, Int. J. Heat Mass Transfer, Vol. 36, No. 14, pages 3421-3427.
AM	Lung-Jieh Yang et al., "A Micro Fluidic System of Micro Channels with On-Site Sensors by Silicon Bulk Micromaching", September 1999, Microfluidic Devices and Systems II, Vol. 3877, pages 267-272.
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AP	Linan Jiang et al., "A Micro-Channel Heat Sink with Integrated Temperature Sensors for Phase Transition Study", 1999, 12 <sup>th</sup> IEEE International Conference on Micro Electro Mechanical Systems, pages 159-164.
AQ	Linan Jiang et al., "Fabrication and characterization of a microsystem for a micro-scale heat transfer study", J. Micromech. Microeng. 9 (1999) pages 422-428, printed in the U.K.
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AY	E. W. Kreutz et al., "Simulation of micro-channel heat sinks for optoelectronic microsystems", Microelectronics Journal 31(2000) pages 787-790.
AZ	J. C. Y. Koh et al., "Heat Transfer of Microstructure for Integrated Circuits", 1986, Int. Comm. Heat Mass Transfer, Vol. 13, pages 89-98.
BA	Snezana Konecni et al., "Convection Cooling of Microelectronic Chips", 1992, InterSociety Conference on Thermal Phenomena, pages 138-144.

Examiner:

*John Kuan*

Date Considered:

*4/2/07*

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)  (37 CFR § 1.98(b))		U.S. Department of Commerce Patent and Trademark Office	
		Attorney Docket No.: COOL-00800	
		Serial No.: 10/698,180  Applicants: Girish Upadhyay et al.  Filing Date: October 30, 2003	
3749 Group Art Unit 3753			
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			
JVC	BB	Michael B. Kleiner et al., "High Performance Forced Air Cooling Scheme Employing Microchannel Heat Exchangers", 1995, IEEE Transactions on Components, Packaging, and Manufacturing Technology-Part A, Vol. 18, No. 4, pages 795-804.	
	BC	Jerry K. Keska Ph. D. et al., "An Experimental Study on an Enhanced Microchannel Heat Sink for Microelectronics Applications", EEP-Vol. 26-2, Advances in Electronic Packaging, 1999, Vol. 2, pages 1235-1259.	
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	BO	"Integrally Grooved Semiconductor Chip and Heat Sink", October 1971, IBM Technical Disclosure Bulletin, Vol. 14, No. 5, page 1425.	
	BP	"Enhanced Cooling of Thermal Conduction Module", IBM Technical Disclosure Bulletin, Vol. 30, No. 5, October 1987, page 426.	
	BQ	"Heat Exchanger Modules for Data Process with Valves Operated by Pressure from Cooling Water Pump", IBM Technical Disclosure Bulletin, Vol. 30, No. 5, October 1987, page 419.	
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	CB	A. J. Arnold, "Structure for the Removal of Heat from an Integrated Circuit Module", IBM Technical Disclosure Bulletin, Vol. 22, No. 6, November 1979, pages 2294-2296.	
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Examiner:	JVC		Date Considered: 4/2/07
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

FORM PTO-1449 (Modified)  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)  (37 CFR § 1.98(b))		U.S. Department of Commerce Patent and Trademark Office	
		Attorney Docket No.: COOL-00800	
		Applicants: Girish Upadhyay et al. Filing Date: October 30, 2003	
		Serial No.: 10/698,180 5744 Group Art Unit: 3733	
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			
AVC	CE	R. C. Chu et al., "Silicon Heat Sink for Semiconductor Chip", IBM Technical Disclosure Bulletin, Vol. 24, No. 11A, April 1982, page 5743.	
	CF	J. M. Eldridge et al., "Heat-Pipe Vapor Cooling Etched Silicon Structure", IBM Technical Disclosure Bulletin, Vol. 25, No. 8, January 1983, pages 4118-4119.	
	CG	J. R. Skobem, "Thermoelectrically Cooled Module", IBM Technical Disclosure Bulletin, Vol. 27, No. 1A, June 1984, page 30.	
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EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

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		Attorney Docket No.: COOL-00800	
		Serial No.: 10/698,180	
		Applicants: Girish Upadhyay et al.	
		Filing Date: October 30, 2003	
		Group Art Unit: 3749 3753	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (17 CFR § 1.98(h))		Applicants: Girish Upadhyay et al.		
		Filing Date: October 30, 2003		Group Art Unit: 3744

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FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: COOL-00800	Serial No.: 10/698,180
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)		Applicants: Girish Upadhyay et al.		
(37 CFR § 1.98(b))		Filing Date: October 30, 2003 Group Art Unit: 3749		
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(37 CFR § 1.98(b))		Filing Date: October 30, 2003		Group Art Unit: 3704
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)				
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# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

<b>Title of Invention</b>	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyा

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 4203448 or 4235285 or 4345267 or 4716494 or 4978638 or 5397919 or 5886870 or 6021045 or 6347036 or 6449157 or 6449162 or 6459582 ).pn

Certification: This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:

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## US Patent Documents

**Note: Applicant is not required to submit a paper copy of cited US Patent Documents**

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
✓	1	4203448	1980-05-20	Johnson et al.			
✓	2	4235285	1980-11-25	Johnson et al.			
✓	3	4345267	1982-08-17	Corman et al.			
✓	4	4716494	1987-12-29	Bright et al.			
✓	5	4978638	1990-12-18	Buller et al.			
✓	6	5397919	1995-03-14	Tata et al.			
✓	7	5886870	1999-03-23	Omori			
✓	8	6021045	2000-02-01	Johnson			
✓	9	6347036	2002-02-12	Yeager et al.	B1		
✓	10	6449157	2002-09-10	Chu	B1		
✓	11	6449162	2002-09-10	Corbin, Jr. et al.	B1		
✓	12	6459582	2002-10-01	Ali et al.	B1		

## Signature

Examiner Name	Date
<i>✓</i>	9/2/07

# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyा

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 2039593 or 4574876 or 6206022 or 6253835 or 6437981 ).pn

Certification: This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

## US Patent Documents

**Note: Applicant is not required to submit a paper copy of cited US Patent Documents**

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
AVC	1	2039593	1936-05-05	T. N. Hubbuch et al.		—	—
	2	4574876	1986-03-11	Aid		—	—
	3	6206022	2001-03-27	Tsai et al.	B1	—	—
	4	6253835	2001-07-03	Chu et al.	B1	—	—
V	5	6437981	2002-08-20	Newton et al.	B1	—	—

## Signature

Examiner Name	Date
	9/2/07

# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

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<b>Title of Invention</b>	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyay

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 6438984 or 6581388 or 6587343 ).pn

**Certification:** This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:

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## US Patent Documents

**Note: Applicant is not required to submit a paper copy of cited US Patent Documents**

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
✓	1	6438984	2002-08-27	Novotny et al.	B1	—	—
✓	2	6581388	2003-06-24	Novotny et al.	B2	—	—
✓	3	6587343	2003-07-01	Novotny et al.	B2	—	—

## Signature

Examiner Name	Date
<i>MCinic</i>	<i>4/2/07</i>

# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

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<b>Title of Invention</b>	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyा

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 5316077 or 6167948 or 6606251 or 20030062149 ).pn

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## US Patent Documents

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init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
AVC	1	5316077	1994-05-31	Reichard		—	—
✓	2	6167948	2001-01-02	Thomas	B1	—	—
✓	3	6606251	2003-08-12	Kenny, Jr. et al.	B1	—	—

## US Published Applications

**Note:** Applicant is not required to submit a paper copy of cited US Published Applications

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
AVC	1	20030062149	2003-04-03	Goodson et al.	A1	—	—

## Signature

Examiner Name	Date
<i>AVC</i>	<i>4/2/07</i>

# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyा

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 0596062 or 2273505 or 4211208 or 6397932 or 20020075645 ).pn

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## US Patent Documents

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init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
✓	1	0596062	1897-12-28	W. P. Firey		—	—
✓	2	2273505	1942-02-17	R. R. Florian		—	—
✓	3	4211208	1980-07-08	Lindner		—	—
✓	4	6397932	2002-06-04	Calaman et al.	B1	—	—

## US Published Applications

**Note: Applicant is not required to submit a paper copy of cited US Published Applications**

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
✓	1	20020075645	2002-06-20	Kitano et al.	A1	—	—

## Signature

Examiner Name	Date
	4/2/07

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Electronic Version v18

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Title of Invention	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyay

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 3361195 or 3771219 or 4644385 or 4893174 or 5386143 or 5658831 or 5675473 or 6140860 or 6477045 or 6492200 or 6578626 ).pn

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## US Patent Documents

**Note: Applicant is not required to submit a paper copy of cited US Patent Documents**

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
dv	1	3361195	1968-01-02	A. Meyerhoff et al.		—	—
	2	3771219	1973-11-13	Tuzi et al.		—	—
	3	4644385	1987-02-17	Nakanishi et al.		—	—
	4	4893174	1990-01-09	Yamada et al.		—	—
	5	5386143	1995-01-31	Fitch		—	—
	6	5658831	1997-08-19	Layton et al.		—	—
	7	5675473	1997-10-07	McDunn et al.		—	—
	8	6140860	2000-10-31	Sandhu et al.		—	—
	9	6477045	2002-11-05	Wang	B1	—	—
V	10	6492200	2002-12-10	Park et al.	B1	—	—
V	11	6578626	2003-06-17	Calaman et al.	B1	—	—

Signature

*dv* 9/2/07

# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

<b>Title of Invention</b>	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE
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Application Number : 10/698180



Confirmation Number: 9903

First Named Applicant: Girish Upadhyा

Attorney Docket Number:

Art Unit:

Examiner:

Search string: ( 5043797 or 5490117 or 5740013 or 5768104 or 5921087 or 6366467 or 6459581 or 6600220 or 6743664 or 20020121105 or 20030121274 or 20040040695 or 20040052049 or 20040089008 or 20040125561 or 20040160741 or 20040188069 ).pn

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## US Patent Documents

**Note: Applicant is not required to submit a paper copy of cited US Patent Documents**

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
<i>✓</i>	1	5043797	1991-08-27	Lopes		—	—
	2	5490117	1996-02-06	Oda et al.		—	—
	3	5740013	1998-04-14	Roesner et al.		—	—
	4	5768104	1998-06-16	Salmonson et al.		—	—
	5	5921087	1999-07-13	Bhatia et al.		—	—
	6	6366467	2002-04-02	Patel et al.	B1	—	—
	7	6459581	2002-10-01	Newton et al.	B1	—	—
<i>✓</i>	8	6600220	2003-07-29	Barber et al.	B2	—	—
<i>✓</i>	9	6743664	2004-07-01	Liang et al.	B2	—	—

## US Published Applications

**Note: Applicant is not required to submit a paper copy of cited US Published Applications**

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
✓VC	1	20020121105	2002-09-05	McCarthy, Jr. et al.	A1	—	—
	2	20030121274	2003-07-03	Wightman	A1	—	—
	3	20040040695	2004-03-04	Chesser et al.	A1	—	—
	4	20040052049	2004-03-18	Wu et al.	A1	—	—
	5	20040089008	2004-05-13	Tilton et al.	A1	—	—
✓	6	20040125561	2004-07-01	Gwin et al.	A1	—	—
✓	7	20040160741	2004-08-19	Moss et al.	A1	—	—
	8	20040188069	2004-09-30	Tomioka et al.	A1	—	—

**Signature**

Examiner Name	Date
<i>✓VCum</i>	<i>4/2/07</i>



## ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18  
Stylesheet Version v18.0

Title of Invention	OPTIMAL SPREADER SYSTEM, DEVICE AND METHOD FOR FLUID COOLED MICRO-SCALED HEAT EXCHANGE				
<p>Application Number: 10/698180 </p> <p>Confirmation Number: 9903</p> <p>First Named Applicant: Girish Upadhyा</p> <p>Attorney Docket Number:</p> <p>Search string: ( 3948316 or 4467861 or 4574876 or 4884630 or 4903761 or 5016090 or 5161089 or 5179500 or 5228502 or 5239443 or 5265670 or 5269372 or 5275237 or 5310440 or 5346000 or 5388635 or 5945217 or 5978220 or 5993750 or 6019165 or 6034872 or 6039114 or 6253832 or 6257320 or 6330907 or 6336497 or 6366462 or 6367544 or 6431260 or 6466442 or 6519151 or 6533029 or 6536516 or 6601643 or 6609560 or 6651735 or 6729383 or 20030213580 ).pn.</p>					
<p><u>Certification:</u> This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:</p> <p>That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.</p>					
<p><b>US Patent Documents</b></p>					
<p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p>					
init	Cite.No.	Patent No.	Date	Patentee	Kind
IVC	1	3948316	1976-04-06	Souriau	
	2	4467861	1984-08-28	Kiseev et al.	
	3	4574876	1986-03-11	Aid	
V	4	4884630	1989-12-05	Nelson et al.	

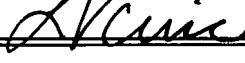
5	4903761	1990-02-27	Cima	
6	5016090	1991-05-14	Galyon et al.	
7	5161089	1992-11-03	Chu et al.	
8	5179500	1993-01-12	Koubek et al.	
9	5228502	1993-07-20	Chu et al.	
10	5239443	1993-08-24	Fahey et al.	
11	5265670	1993-11-30	Zingher	
12	5269372	1993-12-14	Chu et al.	
13	5275237	1994-01-04	Rolfson et al.	
14	5310440	1994-05-10	Zingher	
15	5346000	1994-09-13	Schlitt	
16	5388635	1995-02-14	Gruber et al.	
17	5945217	1999-08-31	Hanrahan	
18	5978220	1999-11-02	Frey et al.	
19	5993750	1999-11-30	Ghosh et al.	
20	6019165	2000-02-01	Batchelder	
21	6034872	2000-03-07	Chrysler et al.	
22	6039114	2000-03-21	Becker et al.	
23	6253832	2001-07-03	Hallefalt	B1
24	6257320	2001-07-10	Wargo	B1
25	6330907	2001-12-18	Ogushi et al.	B1
26	6336497	2002-01-08	Lin	B1
27	6366462	2002-04-02	Chu et al.	B1
28	6367544	2002-04-09	Calaman	B1
29	6431260	2002-08-13	Agonafer et al.	B1
30	6466442	2002-10-15	Lin	B2
31	6519151	2003-02-11	Chu et al.	B2
32	6533029	2003-03-18	Phillips	B1
33	6536516	2003-03-25	Davies et al.	B2
34	6601643	2003-08-05	Cho et al.	B2
35	6609560	2003-08-26	Cho et al.	B2
36	6651735	2003-11-25	Cho et al.	B2
37	6729383	2004-05-04	Cannell et al.	B1

## US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
JK	1	20030213580	2003-11-20	Philpott et al.	A1		

Signature

Examiner Name	Date
	9/2/2007